

Title (en)

ROTOR SUPPORT SYSTEM WITH SHAPE MEMORY ALLOY COMPONENTS FOR A GAS TURBINE ENGINE

Title (de)

ROTORLAGERUNGSSYSTEM FÜR EINE GASTURBINE MIT FORMGEDÄCHTNISLEGIERUNGSKOMPONENTE

Title (fr)

SYSTÈME DE SUPPORT DE ROTOR EN COMPRENANT COMPOSANTS EN ALLIAGE À MÉMOIRE DE FORME POUR UNE TURBINE À GAZ

Publication

EP 3205840 A1 20170816 (EN)

Application

EP 17155175 A 20170208

Priority

US 201615041136 A 20160211

Abstract (en)

A rotor support system for a gas turbine engine may generally include a bearing assembly 104 and a load reduction member 110 configured to be coupled between the bearing assembly 104 and a support frame 108 of the engine. The load reduction member 110 may include a fuse portion 130 configured to fail when a load transmitted through the load reduction member 110 exceeds a predetermined load threshold. The system may also include a load recoupling member 136 provided between the bearing assembly 104 and the support frame 108. The load recoupling member 136 may be formed from a super-elastic shape memory alloy that allows the load recoupling member 136 to undergo recoverable deformation without failing when the fuse portion 130 fails such that the load recoupling member 136 maintains a mechanical connection between the bearing assembly 104 and the support frame 108.

IPC 8 full level

F01D 21/00 (2006.01); **F01D 21/04** (2006.01); **F01D 21/08** (2006.01); **F01D 25/16** (2006.01)

CPC (source: CN EP US)

F01D 21/00 (2013.01 - US); **F01D 21/045** (2013.01 - US); **F01D 21/08** (2013.01 - EP US); **F01D 25/162** (2013.01 - US); **F01D 25/164** (2013.01 - EP US); **F02C 7/06** (2013.01 - CN); **F02C 7/20** (2013.01 - CN); **F16C 27/04** (2013.01 - EP); **F05D 2220/32** (2013.01 - US); **F05D 2240/24** (2013.01 - US); **F05D 2240/242** (2013.01 - US); **F05D 2240/54** (2013.01 - US); **F05D 2240/60** (2013.01 - US); **F05D 2240/91** (2013.01 - US); **F05D 2260/15** (2013.01 - US); **F05D 2300/1723** (2013.01 - US); **F05D 2300/173** (2013.01 - US); **F05D 2300/174** (2013.01 - US); **F05D 2300/505** (2013.01 - CN EP US); **Y02T 50/60** (2013.01 - EP US)

Citation (search report)

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Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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DOCDB simple family (application)

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